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ABSTRACT

All relevant specifications and forms for the removal of asbestos from Oklahoma public buildings are consolidated in this document. The specifications cover the entire procedure for asbestos removal beginning with solicitation for bids; contractor's responsibilities concerning date of completion, general cleanup, laying out work, wage scale, and liquidated damages if work is not completed when scheduled; bonds and affidavits; and prerequisites to final payment. The next section details the terms of the liability insurance the contractor must purchase and maintain, and cites other contractor obligations. The owner's liability and property insurance requirements are also listed. The appendices contain sample forms for a work contract; a work order; statutory, performance, and defect bonds; bid and invoice affidavits; and names and addresses of persons who must be notified of any asbestos renovation project and addresses where disposal permits may be obtained. In addition, the appendices contain Occupational Safety and Health Administration (OSHA) asbestos regulations and a section from the Asbestos Control Act of 1980 that describes in detail the procedures to be used when treating asbestos-containing materials. The last appendix discusses acoustical treatment and painting, where applicable. (MLF)

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EA 013 351

Bidding Documents

for ASBESTOS ABATEMENT

in Oklahoma Public Buildings



March, 1981

Oklahoma
State Department of Education
Leslie Fisher, State Superintendent

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
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SUGGESTED

OKLAHOMA
BIDDING DOCUMENTS
FOR
ASBESTOS ABATEMENT

State-Federal Programs Division
Jack Strahorn, Assistant State Superintendent
Charles Sandman, Director of Federal Financial Assistance Programs

Prepared By

School Plant Services Section
Bob Martin, Administrator
Jim Hodges, AIA, Administrator of Energy
Paul Hallett, P.E., Asbestos Coordinator
Bob Myers, Energy Coordinator

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TREATMENT
OF
FRIABLE
ASBESTOS-CONTAINING
MATERIALS
AT

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SOLICITATION FOR BIDS

Sealed proposals will be received by the _____
(Name of Agency)

at its office, located at _____,
until _____ o'clock p.m., Central _____ Time, on the _____
day of _____ 19 _____, at which time said bids will be opened for
furnishing all labor and materials for _____

Bids received more than ninety-six (96) hours, excluding Saturdays, Sundays, and holidays, before the time set for opening of bids, as well as bids received after the time set for opening of bids, will not be considered and will be returned unopened.

Bids will be publicly opened and read aloud at the above mentioned office immediately following the closing time stated above.

Copies of the general conditions, plans, and specifications and other bidding documents are on file in the above office and are open for public inspection. The bidding documents include the prevailing rate of wages as required by 40 O.S. 1971, § 196.5.

Complete sets of general conditions, plans and specifications and other bidding documents may be obtained by applying to the

_____ at the following location:
(Name of Officer, Agent of Employee)

Applications for sets of plans and specifications, etc., must be accompanied by a deposit of _____ Dollars (\$ _____). The refund of this deposit must be claimed within seven (7) days from the time of opening bids. (If provision for no refund or partial refund is stated in the notice for bids the above sentence may be modified accordingly.)

A cashier's check, a certified check, or a surety bond in the amount of five percent (5%) of the bid shall accompany the sealed proposal of each bidder. Deposits will be returned to the unsuccessful bidders.

_____ reserves the right to
(Name of Agency)
reject any or all bids.

The time period within which a contract will be executed following award to the successful bidder is _____ (state number of days not to exceed sixty (60) days).

Additional information: _____

(Name of Agency)

By _____

TREATMENT OF FRIABLE ASBESTOS CONTAINING MATERIAL

OWNER

PROJECT LOCATIONS

SITE EXAMINATION

It is the responsibility of the bidder to examine thoroughly the sites of this project, and make himself completely familiar with all physical and other conditions effecting the work.

REJECTION OF BIDS

The owner reserves the right to reject any and all bids when such rejection is in the interest of the owner, and to reject the bids of a bidder who is not in a position to perform the contract.

AWARD OF THE CONTRACT

The contract will be awarded to the lowest bidder, provided his bid is reasonable and is to the interest of the owner to accept it. See Appendix A for contract wording.

Each bidder shall be prepared, if so requested by the owner, to present evidence of experience, qualifications, and financial ability to carry out the terms of the contract. The owner reserves the right to waive any informality in bids received when such waiver is in the interest of the owner.

DATE OF COMPLETION

The Contractor must have all work completed by _____.

GENERAL CLEAN UP

The contractor shall continuously keep the building and site free of rubbish. Non-compliance with this requirement will result in the owner having the site cleaned and the expenses will be charged to the contractor.

Contractor shall remove all debris and excess materials leaving the building site free and clear. Contractor shall be held responsible for the final clean up of premises leaving same free from any and all excess materials, complying fully with all OSHA and EPA requirements.

LAYING OUT WORK

Contractor shall immediately upon entering project site for the purpose of beginning work, locate all general reference points and to take such action as necessary to prevent their destruction, laying out his own work and be responsible for all lines, elevations, and other measurements. He must exercise proper precautions to verify figures before laying out work and will be held responsible for any error resulting from his failure to exercise such precautions.

TEMPORARY UTILITIES

The owner will furnish all water, electricity, lighting, and other utilities as necessary.

PREVAILING WAGE SCALE

Contractor must adhere to prevailing wage scale as set by the State Department of Labor. Appendix B for sample.

LIQUIDATED DAMAGES

Bidder shall agree as a part of this Contract to commence work on a date to be specified in a written "Work Order" of the owner, dated after receipt of bids. See copy of suggested Work Order, Appendix C. Bidder shall agree to complete

the building and have it ready for occupancy on or before a date to be established from the bidder's own estimated required number of calendar days, as designated on the Proposal Form, but no later than the Date of Completion above. Bidder further agrees to pay, as liquidated damages, and not in the nature of a penalty, the sum of Fifty Dollars (\$50.00) per day for each consecutive day after bidder's designated date until the work is complete and accepted in writing by the owner.

BONDS AND AFFIDAVITS REQUIRED

Prior to signing the contract, the contractor shall furnish bonds covering the payment of all obligations arising under the contract (Statutory Bond), the faithful performance of the contract (Performance Bond) and protecting against defects (Defect Bond) and affidavits concerning noncollusion and business relationships. See Appendices D thru G for required forms. The bonds stipulated above shall be paid by the contractor. The contractor shall deliver the required bonds to the owner not later than the date of execution of the contract, or if the work is commenced prior thereto in response to a notice to proceed, the contractor shall, prior to commencement of the work, submit evidence satisfactory to the owner that such bonds will be issued.

The contractor shall furnish a Performance Bond in amount at least equal to one-hundred per cent (100%) of the contract price as security for the faithful performance of this contract and separate Payment (Statutory) Bond in an amount not less than fifty percent (50%) of the contract price or in a penal sum not less than the project under this contract and furnishing materials in connection with this contract. Sureties, in issuing these bonds, agrees to waive subrogation by the Surety of its agents or assigns against the owner for any payments made to the contractor or otherwise during the progress of the work, except in case of gross negligence by said owner. Forms as bound within these specifications

must be used for this purpose. Sureties are subject to approval of the owner and must be authorized to do business in the state where the project is located. The bonds must be approved by the owner in writing prior to the signing of the contract.

Attorneys-in-fact who sign bonds or contract bonds must file with each bond a certified and effectively dated copy of their power of attorney. Two (2) copies of each.

SUBSTANTIAL COMPLETION AND FINAL PAYMENT

Neither the final payment nor any part of the retained percentage shall become due until the contractor submits to the owner: releases or waivers of all liens arising out of the contract; an affidavit that the releases and waivers include all the labor materials and equipment for which a lien could be filed and that all payrolls, bills and materials and equipment, and other indebtedness connected with the work for which the owner of his property might in any way be responsible have been paid or otherwise satisfied; consent of surety, if any, to final payment; and such other data establishing payment or satisfaction of all such obligations as the owner may require. If any sub-contractor refuses to furnish a release or waiver, the contractor may furnish a bond satisfactory to the owner to indemnify him against any such lien. If any such lien remains unsatisfied after all payments are made, the contractor shall refund to the owner all moneys that the latter may be compelled to pay in discharging such lien, including all costs and reasonable attorney's fees. See appendix H for claim affidavit.

PREREQUISITES TO FINAL PAYMENT

- A. Certificate of completion issued by the owner.
- B. Certificate by the Surety Company or Companies, delivered to the owner, giving approval of final payment by the owner to the contractor.

CONTRACTOR'S LIABILITY INSURANCE

The contractor shall purchase and maintain such insurance as will protect him from claims set forth below which may arise out of or result from the contractor's operations under the contract, whether such operations be by himself or by a sub-contractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:

1. Claims under workmen's compensation, disability, benefits and other similar employee benefits acts: For the duration of this contract, contractor shall maintain statutory workmen's compensation and shall maintain Employer's Liability Insurance with minimum limits to one-hundred thousand dollars (\$100,000.00). Contractor shall require sub-contractors to provide Workmen's Compensation and Employer's Liability Insurance with the same minimum limits.
2. Claims for damages because of bodily injury, occupational sickness or disease, or death of his Employees, and his claims insured by usual personal injury liability coverage: For the duration of this contract, Contractor shall maintain statutory Workmen's Compensation and shall maintain Employer's Liability Insurance with minimum of one-hundred thousand dollars (\$100,000.00). Contractor shall require sub-contractors to provide Workmen's Compensation and Employer's Liability Insurance with the same minimum limits.
3. Claims for damages because of bodily injury, sickness

or diseases or death of any person other than his employees, and claims insured by usual personal injury liability coverage; For the duration of this contract, Contractor shall maintain Comprehensive General Liability Insurance with minimum bodily injury limits of one-hundred thousand dollars (\$100,000.00) for each person and three hundred thousand dollars (\$300,000.00) for each accident. He shall maintain property damage insurance with minimum limits of fifty thousand dollars (\$50,000.00) for each accident and one-hundred thousand dollars (\$100,000.00) aggregate. The policy shall include contractor's Protective Liability Insurance with the same minimum limits. Contractor shall require sub-contractors to provide Comprehensive General Liability Insurance with the same minimum limits.

4. Claims for damages because of injury to or destruction of tangible property, including loss of use resulting therefrom: For the duration of this contract, contractor shall maintain Comprehensive Liability Insurance with minimum bodily injury limits of one-hundred thousand dollars (\$100,000.00) for each person and three-hundred thousand dollars (\$300,000.00) for each accident. He shall maintain property damage insurance with minimum limits of fifty thousand dollars (\$50,000.00) for each accident and one-hundred thousand dollars (\$100,000.00) aggregate. The policy shall include contractor's Protective Liability Insurance with the same minimum limits. Contractor shall require sub-contractors to provide Comprehensive General Liability Insurance with the same minimum limits.

5. For the duration of this contract, contractor shall maintain Comprehensive Automobile Liability Insurance for all owned, non-owned, and hired vehicles with minimum limits for bodily injury of one-hundred thousand dollars (\$100,000.00) for each person and three-hundred thousand dollars (\$300,000.00) for each accident and property damage minimum limits fifty thousand dollars (\$50,000.00). Contractor shall require sub-contractor to provide Comprehensive Automobile Liability Insurance with the same minimum limits.

Certificate of insurance acceptable to the owner shall be filed with the owner prior to commencement of the work. These certificates shall contain a provision that coverages afforded under the policies will not be cancelled until at least fifteen (15) days prior written notice has been given to the owner.

Copies of certificates of insurance shall be filed with the owner prior to commencing work. The required insurance must be written by a company licensed to do business in the state where the work is located, at the time the policy is issued. In addition, the company must be acceptable to the owner.

OWNER'S LIABILITY INSURANCE

The owner shall be responsible for purchasing and maintaining his own liability insurance and, at his option, may purchase and maintain such insurance as will protect him against any claims which may arise from operations under this contract.

PROPERTY INSURANCE

Unless otherwise provided, the owner shall purchase and maintain property insurance upon the entire work at the site to the full insurable value thereof. This insurance shall include the interests of the owner, the contractor, sub-contractors in the work and shall insure against the perils of fire, extended coverage, vandalism and malicious mischief.

DESCRIPTION OF WORK

The purpose of this section is to describe to the Contractor the scope of work to be done. The major areas affected by this contract should be clearly identified. These specifications describe fully the work required for a complete project.

OTHER CONTRACTOR OBLIGATIONS

Labor, etc.

The contractor shall furnish all labor, materials, services, insurance, and equipment necessary to carry out the removal operations in accordance with the EPA, OSHA, and U.S. Department of Education regulations and any applicable State and local government regulations.

Notification

The contractor shall notify regional EPA office 10 days prior to start of corrective actions. See Appendix I for exact procedure.

Regulations

The contractor shall comply with the requirements of the EPA regulations, National Emission Standards for Asbestos, the OSHA regulations on asbestos, Section 1910.1001, and the U.S. Department of Education regulations and any applicable State and local government regulations which are incorporated by reference.

Posting

The contractor shall post the EPA, OSHA, and Appendix C of the U.S. Department of Education regulations, and any applicable State and local government regulations, at the job site.

Waste Disposal

The contractor shall be responsible for obtaining approval for waste disposal site in compliance with Section 40 CFR 61.25 of the EPA regulations. Proof of proper disposal must be presented to owner. See Appendix J for details.

MISCELLANEOUS

1. Asbestos Control Act. An extract from the Asbestos Control Act of 1980 U.S. Department of Education Regulations can be found as Appendix K in this document. This extract, which is Appendix C of the Control Act, describes in detail the procedures to be used when treating asbestos-containing materials.
2. OSHA Regulations. OSHA regulations pertaining to asbestos are reproduced as Appendix L and can also be located in the EPA Guidance Document: Asbestos Containing Material in School Buildings, Part I. This is the Code of Federal Regulations section 29 CFR 1910.1001.
3. EPA Regulations. The present U.S. EPA regulations called National Emission Standards for Hazardous Air Pollutants, 40 CFR 60, is reproduced as Appendix M and can also be located in the above referenced EPA Guidance Document. It is also anticipated that the U.S. EPA will issue further regulations in 1981, primarily concerning employee notifications in schools.
4. Finishes. Appendix N discusses acoustical treatment and painting for cases of applicability.

C O N T R A C T

THIS CONTRACT AND AGREEMENT, made and entered into this
 _____ day of _____, 19____, by and between
 _____, acting by and through the
 (State or Other Entity)
 _____, party of the first part, herein-
 (Name of Agency)
 after termed _____, and _____

 party of the second part, hereinafter termed "Contractor".

W I T N E S S E T H:

WHEREAS, _____ has caused to be prepared
 (State or Other Entity)
 in accordance with law, certain plans, specifications, and other
 bidding documents for the work hereinafter described and has ap-
 proved and adopted all of said bidding documents, and has caused
 Solicitation for Bids to be given and advertised as required by
 law, and has received sealed proposals for the furnishing of all
 labor and materials for _____

as outlined and set out in the bidding documents and in accordance
 with the terms and provisions of said contract; and,

WHEREAS, Contractor, in response to said Solicitation for
 Bids, has submitted to _____ in the manner
 (State or Other Entity)
 and at the time specified, a sealed proposal in accordance with
 the terms of this contract; and,

WHEREAS, _____, in the manner pro-
 (State or Other Entity)
 vided by law, has publicly opened, examined and canvassed the
 proposals submitted and has determined and declared the above-
 mentioned Contractor to be the lowest responsible bidder on the

above-described project, and has duly awarded this contract to said Contractor, for the sum named in the proposal, to wit:

Dollars (\$ _____);

NOW, THEREFORE, for and in consideration of the mutual agreements and covenants herein contained, the parties to this Contract have agreed, and hereby agree, as follows:

1. The Contractor shall, in a good and first-class, workmanlike manner, at his own cost and expense, furnish all labor, materials, tools, and equipment required to perform and complete said work in strict accordance with this Contract and the following Contract Documents:

_____ all of which documents are on file in the office of the _____

(Name and Address of Agency)

and are made a part of this Contract as fully as if the same were herein set out at length, with the following additions and/or exceptions: (If none, so state.) _____.

2. The _____ shall make payments to
(State or Other Entity)
the Contractor in the following manner: On or about the first day of each month, the agency engineer, or other appropriate person, will make accurate estimates of the value, based on contract prices, of work done and materials incorporated in the work and of materials suitably stored at the site thereof during the preceding calendar month. The Contractor shall furnish to the agency engineer, or other appropriate person, such detailed information as he may request to aid him as a guide in the preparation of the monthly estimates.

Each monthly estimate for payment must contain or have attached an affidavit as required by Senate Bills 469 and 565 of the 1974 Legislature.

On completion of the work, but prior to the acceptance thereof by the _____, it shall be the
(State or Other Entity)
duty of the agency engineer, or other appropriate person, to determine that said work has been completely and fully performed in accordance with said Contract Documents; and upon making such determination said official shall make his final certificate to the _____. The
(State or Other Entity)

Contractor shall furnish proof that all claims and obligations incurred by him in connection with the performance of said work have been fully paid and settled; said information shall be in the form of an affidavit which shall bear the approval of the surety on the contract bonds for payment of the final estimate to the Contractor; thereupon, the final estimate (including retainages) will be approved and paid.

4. The sworn, notarized statement below must be signed and notarized before this Contract will become effective.

IN WITNESS WHEREOF, the parties hereto have caused this instrument to be executed, in four duplicate originals, the day and year first above written.

Party of the Second Part:

Party of the First Part:

CONTRACTOR:

_____, acting

by and through the _____

By _____

By _____

By _____

By _____

State of _____)

County of _____) ss.

_____, of lawful age, being first duly sworn, on oath says that (s)he is the agent authorized by Contractor to submit the above Contract to the _____.

(State or Other Entity)

Affiant further states that Contractor has not paid, given, or donated or agreed to pay, give, or donate to any officer or employee of _____ any money or other thing of value, either directly or indirectly, in the procuring of the contract.
(State or Other Entity)

Subscribed and sworn to before me this _____ day of _____,
19____.

Notary Public

My Commission Expires:

Mr. R. "Bill" Paulk
Commissioner



PREVAILING WAGE SCHEDULE

STATE DEPARTMENT OF LABOR
State Capitol, Suite 110
OKLAHOMA CITY, OKLA. 73105
405/521-2461

CONTRACTORS: THIS SHEET MUST BE POSTED IN
PLAIN SIGHT ON THE APPLICABLE JOB SITE.

CONSTRUCTION - COUNTY: COMANCHE
DATE FILED: October 1, 1979
EFFECTIVE DATE: November 1, 1979

CLASSIFICATION OF WORKERS	Basic Hourly Rate	Fringe Benefits
Asbestos Mechanics	12.33	1.65
Boiler/Mechanics	12.00	2.00
Bricklayers	10.16	1.44
Carpenters	9.00	1.09
Millwrights	9.50	1.09
Carpet & Linoleum Layers	10.10	.75
Cement Masons	10.48	
Power Saw Operators	7.78	
Electricians	10.85	.85
Elevator Constructors	11.49	
Glaziers	9.65	.30
Iron Workers	11.30	1.52
Laborers - Common	6.80	.66
Semi-skilled	7.05	.66
Lathers	10.90	
Painters - Brush	8.65	1.00
Spray	9.30	1.00
Paperhanger	8.95	1.00
Sandblaster	9.00	1.00
Plasterers	11.40	
Plumbers & Steamfitters	12.37	1.66
Roofers	10.40	.09
Sheet Metal Workers	12.20	2.05
Tile, Terrazzo & Marble	11.52	.50

CRIMINAL PENALTIES - Title 40, Section 196.1 thru 196.13 of the Oklahoma Statutes makes it mandatory that all public bodies specify in the call for bids the prevailing hourly rate of wages in all contracts and requires that all contractors pay not less than the prevailing hourly rate of wages to all workmen.

ALL CONTRACTORS TAKE NOTE: These rates, including the fringe benefits, must be paid to all workmen for each hour worked. The Oklahoma Labor Department will not recognize any apprenticeship program unless federally approved and each apprentice registered. The prime contractor and all subcontractors will submit a certified copy of a representative two week payroll to the State Labor Department listing the name, classification, hours, rate of pay and gross pay for all mechanics, laborers and apprentices in their employ, once during the course of a prevailing wage project or at least once a year if the project exceeds a year in duration. Said certified payroll must be by sworn affidavit by the employer or his business representative.

WAGE DETERMINATION FOR:

treatment of mental asbestos spray
erling of west of Benton school

--- CERTIFIED COPY ---

Date issued: 2-21-80

By: Mr. Binding Chong

EFFECTIVE NOVEMBER 15, 1979

OPERATING ENGINEERS - STATE WIDE

CLASS 1 OPERATORS - Crane, sideload (over 30'), guy derrick \$10.85 + 1.54
(add 25¢ for each 50' of crane boom over 100')

CLASS 2 OPERATORS - Crane hook, hydro crane, piledriver, dragline, shovel, clamshell, backhoe, gradall, cherry picker, heavy duty mechanic, welder, sideload, whirley, panel board work plant \$10.85 + 1.54

CLASS 3 OPERATORS - Tail booms, turnapull, power drive, hole digger, motor patrol, scraper, dozer, OH 10,15,16,20,21, euclid, 15-24, loader, asphalt lay machine, Fordson tractor, trenching machine .. \$10.00 + 1.54

CLASS 4 OPERATORS - Hoists, forklift, tug boat, loader, dredging machine, rotary drilling machine, locomotive engineer, boring, form grader, winch truck, roller, concrete buster, tamper, conveyor, mixer, oiler distributor, concrete pump, pulverizer, farm tractor, screed, generator engines, heater, sand barge, tugger, fireman, boiler operator, crushing plants, signal man on whirleys \$10.35 + 1.54

CLASS 5 OPERATORS - Permanent elevator, air compressor, welding machine, pump, tilt top trailer, greaser, fuelman, truck crane oiler, helpers \$9.35 + 1.54

FOR MACHINES NOT LISTED, THE SCALE FOR EQUIPMENT MOST SIMILAR SHALL BE USED.

Owner shall obtain from the Oklahoma State Department of Labor, a copy of the current applicable Labor Wage sheet and insert here!

ESD-79-9-01B

Appendix B

WORK ORDER

TO: _____
(Contractor)

FROM: _____
(Awarding Public Agency)

YOU ARE HEREBY NOTIFIED that all contract documents have been
executed and accepted in relation to the Contract entered into on
the _____ day of _____, 19____, by and between
_____ acting by and through the _____
(State or Other Entity)
_____, and _____
(Name of Agency) (Contractor)
and that work may now be commenced in accordance with said Contract.

DATE

Signature of Official Representative
of Owner

STATUTORY BOND

KNOW ALL MEN BY THESE PRESENTS:

That _____,
 as Principal, and _____,
 a corporation organized under the laws of the State of _____
 and authorized to transact business in the State of Oklahoma, as Surety, are
 held and firmly bound unto _____
 (State or Other Entity)

in the penal sum of _____
 Dollars (\$ _____) in lawful money of the United States of America, for
 the payment of which, well and truly to be made, we bind ourselves and each of
 us, our heirs, executors, administrators, trustees, successors, and assigns,
 jointly and severally, firmly by these presents.

The condition of this obligation is such that:

WHEREAS, said Principal entered into a written Contract with _____
 _____, dated _____, 19_____, for
 (State or Other Entity)

all in compliance with the plans and specifications therefore, made a part of
 said Contract and on file in the Office of _____

(Name and Address of Agency)

NOW, THEREFORE, if said Principal shall fail or neglect to pay all indebtedness incurred by said Principal or subcontractors of said Principal who perform work in the performance of such contract, for labor and materials and repairs to and parts for equipment used and consumed in the performance of said contract after the same becomes due and payable, the person, firm, or corporation entitled thereto may sue and recover on this bond, the amount so due and unpaid.

It is further expressly agreed and understood by the parties hereto that no changes or alterations in said Contract and no deviations from the plan or mode of procedure herein fixed shall have the effect of releasing the sureties, or any of them, from the obligations of this Bond.

IN WITNESS WHEREOF, the said Principal has caused these presents to be executed in its name and its corporate seal to be hereunto affixed by its duly authorized officers, and the said Surety has caused these presents to be executed in its name and its corporate seal to be hereunto affixed by its attorney-in-fact, duly authorized so to do, the day and year set forth below.

DATED this _____ day of _____, 19 ____.

PRINCIPAL:

BY _____ Title

ATTEST:

SURETY:

By _____ Attorney-in-Fact

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS:

That _____,
 as Principal, and _____,
 a corporation organized under the laws of the State of _____
 and authorized to transact business in the State of Oklahoma, as Surety, are
 held and firmly bound unto _____ in the penal sum of ____
 (State or Other Entity)

_____ Dollars (\$_____) in
 lawful money of the United States of America, for the payment of which, well and
 truly to be made, we bind ourselves and each of us, our heirs, executors, ad-
 ministrators, trustees, successors, and assigns, jointly and severally firmly
 by these presents.

The condition of this obligation is such that:

WHEREAS, said Principal entered into a written Contract with _____
 _____, dated _____, 19__, for
 (State or Other Entity)

all in compliance with the plans and specifications therefore, made a part of
 said Contract and on file in the office of _____

(Name and Address of Agency)

NOW, THEREFORE, if said Principal shall, in all particulars, well, truly,
 and faithfully perform and abide by said Contract and each and every covenant,
 condition, and part thereof and shall fulfill all obligations resting upon said
 Principal by the terms of said Contract and said specifications; and if said
 Principal shall protect and save harmless said _____
 (State of Other Entity)

from any pecuniary loss resulting from the breach of any of the items, covenants and conditions of said contract resting upon said Principal, then this obligation shall be null and void, otherwise to be and remain in full force and effect.

It is further expressly agreed and understood by the parties hereto that no changes or alterations in said Contract and no deviations from the plan or mode of procedure herein fixed shall have the effect of releasing the sureties, or any of them, from the obligations of this Bond.

IN WITNESS whereof, the said Principal has caused these presents to be executed in its name and its corporate seal to be hereunto affixed by its duly authorized officers, and the said Surety has caused these presents to be executed in its name and its corporate seal to be hereunto affixed by its attorney-in-fact, duly authorized so to do, the day and year set forth below.

DATED this ____ day of _____, 19 __.

PRINCIPAL:

By _____

ATTEST:

SURETY:

By _____
Attorney-in-Fact

DEFECT BOND

KNOW ALL MEN BY THESE PRESENTS:

That _____
 as Principal, and _____,
 a corporation organized under the laws of the State of _____
 and authorized to transact business in the State of Oklahoma, as Surety, are held
 and firmly bound unto _____ in the penal sum of _____
 (State or Other Entity)
 _____ Dollars (\$ _____) in lawful money of the
 United States of America, said sum being equal to One Hundred Percent (100%)
 of the contract price, for the payment of which, well and truly to be made, we
 bind ourselves and each of us, our heirs, executors, administrators, trustees,
 successors, and assigns, jointly and severally, firmly by these presents.

The condition of this obligation is such that:

WHEREAS, said Principal entered into a written Contract with _____
 _____, dated _____, 19 __, for
 (State or Other Entity)

all in compliance with the plans and specifications therefore, made a part of
 said Contract and on file in the office of _____

 (Name and Address of Agency)

NOW, THEREFORE, if said principal shall pay or cause to be paid to _____
 _____ all damage, loss, and expense which may result
 (State or Other Entity)
 by reason of defective materials and/or workmanship in connection with said work,
 occurring within a period of one (1) year from and after the acceptance of said
 project by _____; then this obligation shall be null
 (State or Other Entity)
 and void, otherwise to be and remain in full force and effect.

It is further expressly agreed and understood by the parties hereto that no changes or alterations in said Contract and no deviations from the plan or mode of procedure herein fixed shall have the effect of releasing the sureties or any of them, from the obligations of this Bond.

IN WITNESS WHEREOF, the said Principal has caused these presents to be executed in its name and its corporate seal to be hereunto affixed by its duly authorized officers, and the said Surety has caused these presents to be executed in its name and its corporate seal to be hereunto affixed by its attorney-in-fact duly authorized so to do, the day and year set forth below.

DATED this _____ day of _____, 19 __.

PRINCIPAL:

By _____

ATTEST:

SURETY:

By _____
Attorney-in-Fact

BID AFFIDAVITSA. Noncollusion Affidavit

STATE OF _____)
) ss.
 COUNTY OF _____)

_____ of lawful age, being first
 duly sworn, on oath says that (s)he is the agent authorized by the bidder to
 submit the attached bid. Affiant further states that the bidder has not been
 a party to any collusion among bidders in restraint of freedom of competition
 by agreement to bid at a fixed price or to refrain from bidding; or with any
 state official or employee as to quantity, quality, or price in the prospective
 contract, or any other terms of said prospective contract; or in any discussions
 between bidders and any state official concerning exchange of money or other
 things of value for special consideration in the letting of a contract.

Subscribed and sworn to before me this _____ day of _____, 19__.

 Notary Public

My Commission Expires:

B. Business Relationships Affidavit

STATE OF _____)
) ss.
 COUNTY OF _____)

_____, of lawful age, being first duly sworn, on oath says that (s)he is the agent authorized by the bidder to submit the attached bid. Affiant further states that the nature of any partnership, joint venture, or other business relationship presently in effect or which existed within one (1) year prior to the date of this statement with the architect, engineer, or other party to the project is as follows:

Affiant further states that any such business relationship presently in effect or which existed within one (1) year prior to the date of this statement between any officer or director of the bidding company and any officer or director of the architectural or engineering firm or other party to the project is as follows:

Affiant further states that the names of all persons having any such business relationships and the positions they hold with their respective companies or firms are as follows:

(If none of the business relationship hereinabove mentioned exist, affiant should so state.)

Subscribed and sworn to before me this _____ day of _____, 19__.

Notary Public

My Commission Expires:

CLAIM OR INVOICE AFFIDAVIT

STATE OF _____)
) ss.
 COUNTY OF _____)

The undersigned (architect, contractor, supplier, engineer, or supervisory official), of lawful age, being first duly sworn, on oath says that this (invoice, claim or contract) is true and correct. Affiant further states that the (work, services, or materials) as shown by this invoice or claim have been (completed or supplied) in accordance with the plans, specifications, orders, or requests furnished to the affiant. Affiant further states that (s)he has made no payment, given, or donated or agreed to pay, give, or donate, either directly or indirectly, to any elected official, officer, or employee of the State of Oklahoma, of money or any other thing of value to obtain payment or the award of this contract.

 Contract or Supplier

Subscribed and sworn to before me this _____ day of _____, 19____.

 Notary Public

My Commission Expires:

 Architect, Engineer, or Other Supervisory
 Official

Subscribed and sworn to me this _____ day of _____, 19____.

 Notary Public

My Commission Expires:

NOTIFICATIONS

In compliance with Section 61.22 (d)(2) of 40 CFR, Part 61, the contractor shall notify the regional U.S. Environmental Protection Agency (EPA) by a letter post marked at least 10 days prior to the start of any asbestos renovation project. EPA will automatically notify the Occupational Safety and Health Administration (OSHA). The notice should be sent to:

Martin Brittain, Enforcement Division
USEPA 1201 Elm Street
First International Building
Dallas, Texas 75278
(214) 767-2755

A copy of this letter should also be sent to:

Bob Martin, Administrator
School Plant Services
State Department of Education
2500 North Lincoln Boulevard
Oklahoma City, Oklahoma 73105

and

Dale McHard, Chief
Occupational and Radiological Health Services
Oklahoma State Department of Health
P.O. Box 53551
Oklahoma City, Oklahoma 73152

The notification shall include the following information:

1. Name and address of the contractor.
2. Address and description of facilities, including size, age and prior use of the facilities, and the approximate square footage of friable asbestos material present.
3. Scheduled starting and completion dates for renovation.
4. Methods to be employed during renovation.
5. Procedures to be used to comply with this EPA regulation.
6. The name and address of the waste disposal site where the asbestos will be taken.

DISPOSAL PERMITS

Permits for asbestos hauling trucks and disposal sites can be obtained from:

Donald Hensch, Director
Industrial Waste Division
Industrial and Solid Waste Services
Oklahoma State Department of Health
P.O. Box 53551
Oklahoma City, Oklahoma 73152
(405) 271-5338

Currently approved disposal sites are available from Mr. Hensch.

The following approved asbestos disposal site is the only one currently in Oklahoma at this time (March 1981):

U. S. Pollution Control, Inc. (Office Address)
2000 Classen Center
Suite 320 South
Oklahoma City, Oklahoma 73106
(405) 528-8371

The U. S. Pollution Control Site address and location is:

Lone Mountain Site	(Located 5 miles east and
Route 2 - Box 180A	one mile north of junction
Waynoka, Oklahoma 73860	of state highways 15 and 281)

Extract From Asbestos Control Act Of 1980
Final Regulations of U. S. Department
of Education, CFR Parts 230 and 231,
dated January 16, 1981

APPENDIX C

Procedures for Containing and Removing Building Materials Containing Asbestos

These procedures have been developed by the Environmental Protection Agency and represent the best information currently available on controlling the release of fibers from friable materials containing asbestos. The purpose of the procedures is to reduce to the maximum extent possible the risk of contamination of areas of a building adjacent to the area in which asbestos containment or removal activities are being conducted and to provide maximum protection for workers involved in those activities and other users of the building.

I. Introduction -

(a)(1) The three methods for containing or removing material containing asbestos are: (i) Encapsulation, in which the material is coated with a bonding agent called a sealant to prevent the release of fibers.

(ii) Enclosure, in which the material is separated from the building environment by impermeable barriers.

(iii) Removal.

(2) Each of these methods can be used separately or in combination with one or both of the others.

(b) In order for encapsulation, enclosure, or removal to reduce imminent hazards to the health and safety of school children and school employees, the work must be performed carefully. Poorly performed work not only creates a risk for persons performing this work, but is likely to increase the risk to students, school employees, and other persons using the building. To insure that the building environment and the outside air are not contaminated and that workers are protected from exposure to asbestos, all procedures for encapsulation, enclosure, or removal must--

(1) Conform to the procedures contained in Section II (of this appendix), General Work Practices;

(2) Conform to the specific work practices contained in the appropriate section of this appendix for the specific control method used. Section III contains work practices for encapsulation. Section IV contains work practices for enclosure. Section V contains work practices for removal;

(3) Comply with OSHA asbestos regulations, 29 CFR 1910, 1001; and

(4) Comply with EPA regulations, 40 CFR Part 61, Subpart B, National Emission Standards for Hazardous Air Pollutants (NESHAPS): Asbestos

(c) Persons who perform encapsulation, enclosure, or removal must become familiar with these requirements before taking any action. The OSHA and NESHAPS regulations can be found in "Asbestos-Containing Materials in School Buildings: A Guidance Document," Part I, which is available by calling 800-424-9065 (in Washington, D.C. 554-1404).

All procedures for containment and removal of asbestos must comply with the following:

(a) Medical services. The party responsible for the encapsulation, enclosure, or removal (referred to in these appendices as "the contractor") shall provide medical services to employees as required by OSHA regulations, 29 CFR 1910.1001(j).

(b) Worker instruction. The contractor and its employees shall be instructed, prior to the beginning of the encapsulation, enclosure, or removal, in--

- (1) The health hazards of asbestos;
- (2) The use of respirators and protective clothing;
- (3) Work practices and safety procedures;
- (4) Control of the release of asbestos fibers; and
- (5) Proper preparation and decontamination of a worksite.

(c) Materials. The contractor shall obtain the following materials, which are necessary for any procedure related to the encapsulation, enclosure, or removal of asbestos: NOTE--The following list does not include ordinary construction materials such as lumber and hardware. It also does not include materials that are necessary for one procedure but not the others. These are discussed in the individual sections on encapsulation, enclosure, and removal.

- (1) Respirators (see Paragraph (d)).
- (2) Replacement cartridges for respirators.
- (3) Disposable clothing for workers, including headgear and footwear.
- (4) Shoes for use in the work area. Workers may not wear the same pair of shoes in the work area as they do in the clean areas of the building.
- (5) Duct tape.
- (6) Polyethylene sheets (6 mil., and 2 or 4 mil.).
- (7) Warning signs. (See OSHA regulations, 29 CFR 1910.1001(g)).

(d) Respirators. The contractor shall select the proper type of respirator in accordance with OSHA regulations 29 CFR 1910.1001(d). The contractor shall be able to demonstrate that the type of respirator used by its employees is appropriate for the level of fibers found or expected in the area, as required by I 1910.1001(d)(2).

(e) Decontamination area.

(1) Before beginning the encapsulation, enclosure, or removal, the contractor shall construct a decontamination area to prevent release of fibers to the exterior environment and to protect workers and others from fiber inhalation. This decontamination area must consist of three rooms:

- (i) A clean room where workers enter and leave the job area.
- (ii) A shower for decontamination of workers before they leave the job area.
- (iii) A room for removal and storage of contaminated items. This room is referred to in this appendix as the "contaminated room".

(2) If it is possible to use existing rooms in close proximity to the worksite, it may be necessary to construct temporary tunnels, from lumber and plastic, to connect these rooms to the work area. If it is not possible to use existing rooms in close proximity to the worksite, it may be necessary to construct a temporary clean room, shower, and contaminated room, from lumber and plastic, near the work area. Although some innovation is likely to be necessary, the arrangement for the decontamination area must include the following features; (i) There must be one clearly designated route from the clean room into the work area, and back out. The shower may be used as a segment of the passageway between the clean room and the contaminated room.

The doorway between the contaminated room and the work area is the only doorway through which anyone may be allowed to enter the work area; there may not be any other entrance. If there is a doorway directly from the clean room to the contaminated room, it must be used for traffic in that direction only. No one may be allowed to go from the contaminated room to the clean area without first passing through, and using, the shower.

(ii)(A) The contractor shall construct airlocks in any passages between the clean room and the contaminated room. Each airlock must consist of two sets of two plastic sheets; one set at one end of the airlock and the other at the other end, at least two meters away. Each of the sheets must extend from floor to ceiling and be constructed of 2 or 4 mil plastic. The plastic sheets must be hung close together, with one sheet taped along the top of the doorway and down one side and the other taped along the top and down the other side.

(B) The shower should also function as a airlock with a set of two sheets at each entrance. If the shower is the only passage between the clean room and the contaminated room, no other airlocks are necessary.

(iii) The clean room must contain a space where workers can place their street clothes and a space for the storage of clean work clothes, respirators, respirator cartridges, soap, and towels.

(iv) If there are no usable permanent shower facilities, the contractor shall construct a temporary shower. The shower must have a ceiling. The shower must have a container for the disposal of used respirator cartridges. Water from the shower must be pumped to an existing drain in the building or collected for disposal.

(v) The contaminated room must have an area for workers to remove contaminated clothing and shoes and to store contaminated personal items (such as workshoes and gloves) and contaminated tools and equipment. It must also have containers for disposal of contaminated clothing as contaminated waste (see paragraph (k)).

(vi) Toilets, permanent or portable, must be available in the work area or contaminated room.

(f) Work area preparation. Before beginning the encapsulation, enclosure, or removal, the contractor and its employees shall use the following procedures to prevent the release of asbestos fibers from the work area: (1) Clean all movable items--such as furniture and equipment--with damp cloths and store them in a clean area outside of the work area. Clean all immovable items with damp cloths, wrap the immovable items completely in plastic, and secure the plastic with duct tape. Dispose of the cleaning cloths as contaminated waste (see paragraph (k)).

(2) Bring in any large pieces of equipment, such as scaffolds and airless sprayers, that will not fit easily through the airlocks.

(3) Isolate the work area completely from the rest of the building by constructing barriers across all doorways or corridors except those in the decontamination area that are to be used by the workers. Construct the barriers so as to prohibit passage through them. Use 6 mil plastic, and tape the seams securely.

(4) Turn off all heating, ventilation, and air conditioning systems. Seal all heating registers, vents, and air ducts with plastic sheeting and duct tape. Lock windows and seal them with plastic tape. Remove all curtains, blinds, and other window coverings.

(5) Cover the floors with at least one layer of 6 mil plastic sheets. Bring the floor coverings up the walls and attach them with duct tape to the wall coverings approximately two feet above the floor, cover the walls

with 2 or 4 mil plastic sheets so that the sheets overlap the floor sheets, and secure them in place with tape.

(6) Turn off all electrical circuits and lock the electrical panels or boxes. If necessary, install temporary lighting.

(7) Post warning signs outside all entrances to contaminated areas of the building as specified in OSHA regulations, 29 CFR 1910.1001(g).

(8)(i) Arrange for air monitoring and inspections as required by OSHA regulations, 29 CFR 1910.1001(f) (air monitoring services should be provided by a reputable laboratory under direct contract to the building owner). At a minimum, have a single environmental sample collected outside the building at the beginning of the project.

(ii) Each day during the encapsulation, enclosure, or removal procedure, collect at least two air samples within the work area and two air samples immediately outside the work area.

(9) Take down light fixtures in the work area. Clean them with damp cloths and remove them from the work area, or-if debris on the fixtures cannot be removed-discard the fixtures as contaminated waste (see paragraph (k)).

(10) If it is necessary to remove a suspended ceiling to reach the materials containing asbestos, carefully take down the ceiling. Clean the ceiling tiles with damp cloths and store them outside the work area, or-if debris on the tiles cannot be removed-dispose of the tiles as contaminated waste (see paragraph(k)).

(g) Measures for worker protection. Each worker, and any other person who enters the job site (e.g., an industrial hygienist, an inspector, etc.) shall follow these procedures: (1) In the clean room before entering the work area, remove all street clothing, underwear, and shoes. Put on respirator, then dress in disposable coveralls and headgear (note that it is necessary to put on the respirator before the disposable headgear). Pass through the airlocks into the contaminated room. Then proceed to the work area.

(2) Never remove respirator while in the work area. No one may eat, drink, smoke, or chew tobacco or gum while in the work area.

(h) Procedures for worker decontamination. At the end of each work shift and before breaks, workers and any other persons in the work area shall follow these procedures when leaving the work area: (1) Before entering the contaminated room, remove all gross contamination from disposable clothing.

(2) In the contaminated room, remove all clothing and work shoes, leaving on only the respirator.

(3) Proceed to the shower and wet hair, body, and respirator before removing respirator. Complete shower, washing thoroughly with soap and water.

(4) Remove and discard respirator cartridges in the container provided in the shower. Proceed to the clean room. Clean respirator with a disinfectant, dry it, insert new cartridges, and place respirator in a dry, clean plastic bag.

(5) Put on street clothes and shoes or a new set of disposable clothing.

(i) Corrective action. Refer to Sections III, IV, V of this appendix for directions on the specific control procedures being used.

(j) Procedures for cleaning the work area. NOTE-The contractor and its employees shall follow personal protection procedures (see paragraphs (g) and (h)) while conducting steps (1) through (7) of this paragraph (j).

(1) Dispose of all scrap and debris from the work area, the contaminated room, and the clean room. Treat this debris as contaminated waste (see paragraph (k)).

(2) Remove all floor and wall coverings except heating and ventilation duct covers, barriers, and airlocks. Dispose of the plastic and other materials as contaminated waste.

(3) Wet-clean--with a damp mop, sponge, or cloth--all floors, walls, and other surfaces--including any furniture and equipment in the work area or contaminated room. Wait 24 hours to allow airborne fibers to settle; during this period allow no ventilation or traffic in the area.

(4) Wet-clean all surfaces again, and again wait 24 hours.

(5) Wet-clean all surfaces once more (EPA recommends that this final cleaning be supplemented by the use of a High Efficiency Particulate Absolute (HEPA) vacuum cleaner).

(6) Visually inspect the entire area to make sure it is clean. If dry wiping of surfaces reveals dust contamination, do further wet-cleaning. The monitoring of air may be required by the State of locality or specified in the contract.

(7) When the entire area is clean, dismantle all airlocks, barriers, and temporary shower facilities. Remove coverings from heating and ventilation ducts. Inspect all ducts, especially the horizontal sections, for debris containing asbestos, and vacuum with a HEPA vacuum cleaner or wet-clean the ducts, as necessary. Replace all heating, ventilation, and air conditioning filters, and dispose of old filters as contaminated waste. Dispose of all plastic and lumber as contaminated waste. Remove from the work area all cleaned equipment belonging to the contractor.

(8) Return to the work area furniture and other movable items stored during the encapsulation, enclosure, or removal. Restore electrical and other systems to operation, and return the building to normal use.

(k) Disposal of contaminated waste. The contractor and its employees shall follow the procedures in paragraph (k)(1) through (4) when disposing of asbestos-containing materials removed from the building structure, lumber and plastic used in barriers and airlocks, debris remaining on the floor, cleaning cloths, and any other contaminated materials.

(1) Place the waste in impermeable containers (EPA recommends that the waste be placed in 6 mil. polyethylene bags and that the bags be placed in sealable fiber drums). The waste containers must be sealed and labeled with warning signs as required by OSHA regulations, 29 CFR 1019.1001(g)(2).

(2) Handle containers carefully so that they do not break. The containers must be taken to the entrance of the work area, cleaned with a damp cloth, and placed in the airlock.

(3) A decontaminated worker shall take the waste containers from the airlock to a loading area for transportation to a disposal site.

(4) EPA recommends that all workers involved in disposal activities wear respirators.

(5) Dispose of the waste in compliance with EPA regulations, 40 CFR 61.22 and 61.25.

(6) Contractors using bags and drums shall observe the following procedures:

(i) If a bag is intact, it may be removed from the drum before disposal, and the drum may be recycled.

(ii) If a drum has been contaminated by leakage from a broken bag inside it, it must be buried with the bags.

III. Work Practices for Removal

These procedures are for wet removal of building materials containing asbestos. Wet removal is the most common removal method. Removal operations using other techniques are also acceptable if the contractor can demonstrate that those techniques are in compliance with EPA and OSHA regulations.

After completing construction of the decontamination area and preparation of the work area, the contractor and its employees shall follow these procedures in removing and disposing of materials containing asbestos:

(a) The removal process.

(1) Thoroughly saturate with water the material containing asbestos. EPA recommends the use of water that has been amended with a surfactant, or wetting agent, to increase its penetration and reduce the volume of water required. This surfactant is usually 50 percent polyoxyethylene ether and 50 percent polyoxyethylene ester or the equivalent (such as a low-sudsing soap). It is mixed with water at a rate of one ounce of surfactant to five gallons of water.

(2) Spray the amended water onto the material in a fine mist, using either an airless spray gun set at low pressure or some other low-pressure applicator such as a hand-held pesticide applicator.

(3) To make sure the material is thoroughly saturated, it may be necessary to spray it several times or to spray it once the night before removal is planned and again immediately before removal.

(4) Remove material containing asbestos, using broad-bladed putty knives or any other suitable tools. If any dry areas are exposed during the course of removal, stop scraping immediately and spray the dry material with water. To remove the last of the material containing asbestos, use a wire brush, wet rag, or sponge.

(5) Usually the material containing asbestos is allowed to drop to the ground. If the workers are standing on the ground, they can immediately place the removed material directly into sealable, impermeable containers. If scaffolding is used, the wet material containing asbestos can be collected in sealable, impermeable containers mounted on the scaffolding. One convenient method involves constructing chutes that lead directly into containers that are also attached to the scaffolding near the floor.

(6) No matter what collection technique is used, the wet material must be placed in sealable impermeable containers before it dries.

(7) If the material is to remain on the floor for any length of time, it must be periodically resprayed with water to keep it moist.

(8) EPA recommends that 6 mil. plastic bags be used as containers for asbestos waste and that the bags be placed in fiber drums for transportation to the disposal site.

(9) OSHA requires that the filled containers be sealed and warning labels attached. (See 29 CFR 1910.1001(g)(2).)

(b) The Disposal process

(1) The contractor shall dispose of containers of asbestos-contaminated waste in accordance with the provisions of paragraph (k) of Section II of this appendix.

IV. Work Practices for Encapsulation

(A) A contractor that encapsulates material containing asbestos in order to reduce imminent hazards to the health and safety of school children and school employees shall use sealants that have been awarded fireproofing ratings of Class "A".

(b)(1) In order to minimize the release of fibers, sealants should be applied with an airless spray gun set at the minimum pressure at which the sealant can be applied.

(2) Sealants that cannot be applied by airless spray shall be applied at the lowest possible pressure to reduce fiber release.

(c) The contractor shall consult with the sealant's manufacturer to learn the recommended coverage rate, number of coats, time allowed between coats, and dilution of sealant, if any.

V. Work Practices For Enclosure

(a) A contractor that encloses material containing asbestos in order to reduce imminent hazards to the health and safety of school children and school employees shall insure that--

(1) The material to be enclosed is not exposed to an air plenum system; and

(2) The barriers constructed to enclose the material are airtight and impermeable.

(b) Installation of an enclosure barrier usually necessitates either penetrating or touching the material containing asbestos. Because this operation is usually performed dry, higher fiber levels than those created during removal operations are usually present and may require more stringent respiratory protection for workers. These requirements are described in OSHA regulations, 29 CFR 1910.1001.

U.S. Department of Labor- Occupational Safety and Health Administration (OSHA) Asbestos Regulations (Code of Federal Regulations Title 29, Part 1910)

Section 1910.1001

(a) Definitions.

For the purpose of this section.

(1) "Asbestos" includes chrysotile, amosite, crocidolite, tremolite, anthophyllite, and actinolite.

(2) "Asbestos fibers" means asbestos fibers longer than 5 micrometers.

(b) Permissible exposure to airborne concentrations of asbestos fibers.

(1) *Standard effective July 7, 1972.* The 8-hour time-weighted average airborne concentrations of asbestos fibers to which any employee may be exposed shall not exceed five fibers, longer than 5 micrometers, per cubic centimeter of air, as determined by the method prescribed in paragraph (e) of this section.

(2) *Standard effective July 1, 1976.* The 8-hour time-weighted average airborne concentrations of asbestos fibers to which any employee may be exposed shall not exceed two fibers, longer than 5 micrometers, per cubic centimeter of air, as determined by the method prescribed in paragraph (e) of this section.

(3) *Ceiling concentration.* No employee shall be exposed at any time to airborne concentrations of asbestos fibers in excess of 10 fibers, longer than 5 micrometers, per cubic centimeter of air, as determined by the method prescribed in paragraph (e) of this section.

(c) Methods of compliance.

(1) Engineering methods.

(i) *Engineering controls.* Engineering controls, such as, but not limited to, isolation, enclosure, exhaust ventilation, and dust collection, shall be used to meet the exposure limits prescribed in paragraph (b) of this section.

(ii) Local exhaust ventilation.

(a) Local exhaust ventilation and dust collection systems shall be designed, constructed, installed, and maintained in accordance with the American National Standard Fundamentals Governing the Design and Operation of Local Exhaust Systems, ANSI Z9.2-1971, which is incorporated by reference herein.

(b) See § 1910.6 concerning the availability of ANSI Z9.2-1971, and the maintenance of a historic file in connection therewith. The address of the American National Standards Institute is given in § 1910.100.

(iii) *Particular tools.* All hand-operated and power-operated tools which may produce or release asbestos fibers in excess of the exposure limits prescribed in paragraph (b) of this section, such as, but not limited to, saws, scorers, abrasive wheels, and drills, shall be provided with local exhaust ventilation systems in accordance with subdivision (ii) of this subparagraph.

(2) Work practices.

(i) *Wet methods.* Insofar as practicable, asbestos shall be handled, mixed, applied, removed, cut, scored, or otherwise worked in a wet state sufficient to prevent the emission of airborne fibers in excess of the exposure limits prescribed in paragraph (b) of this section, unless the usefulness of the product would be diminished thereby.

(ii) *Particular products and operations.* No asbestos cement, mortar, coating, grout, plaster, or similar material containing asbestos shall be removed from bags, cartons, or other containers in which they are shipped, without being either wetted, or enclosed, or ventilated so as to prevent effectively the release of airborne asbestos fibers in excess of the limits prescribed in paragraph (b) of this section.

(iii) *Spraying, demolition, or removal.* Employees engaged in the spraying of asbestos, the removal, or demolition of pipes, structures, or equipment covered or insulated with asbestos, and in the removal or demolition of asbestos insulation or coverings shall be provided with respiratory equipment in accordance with paragraph (d)(2)(iii) of this section and with special clothing in accordance with paragraph (d)(3) of this section.

(d) Personal protective equipment.

(1) Compliance with the exposure limits prescribed by paragraph (b) of this section may not be achieved by the use of respirators or shift rotation of employees, except:

(i) During the time period necessary to install the engineering controls and to institute the work practices required by paragraph (c) of this section;

(ii) In work situations in which the methods prescribed in paragraph (c) of this section are either technically not feasible or feasible to an extent insufficient to reduce the airborne concentrations of asbestos fibers below the limits prescribed by paragraph (b) of this section; or

(iii) In emergencies.

(iv) Where both respirators and personnel rotation are allowed by subdivisions (i), (ii), or (iii) of this subparagraph, and both are practicable, personnel rotation shall be preferred and used.

(2) Where a respirator is permitted by subparagraph (1) of this paragraph, it shall be selected from among those approved by the Bureau of Mines, Department of the Interior, or the National Institute for Occupational Safety and Health, Department of Health, Education, and Welfare, under the provisions of 30 CFR Part 11 (37 F.R. 6244, Mar. 25, 1972), and shall be used in accordance with subdivisions (i), (ii), (iii), and (iv) of this subparagraph.

(i) *Air purifying respirators.* A reusable or single use air purifying respirator, or a respirator described in subdivision (ii) or (iii) of this subparagraph, shall be used to reduce the concentrations of airborne asbestos fibers in the respirator below the exposure limits prescribed in paragraph (b) of this section, when the ceiling or the 8-hour time-weighted average airborne

concentrations of asbestos fibers are reasonably expected to exceed no more than 10 times those limits.

(ii) *Powered air purifying respirators.* A full facepiece powered air purifying respirator, or a powered air purifying respirator, or a respirator described in subdivision (iii) of this subparagraph, shall be used to reduce the concentrations of airborne asbestos fibers in the respirator below the exposure limits prescribed in paragraph (b) of this section, when the ceiling or the 8-hour time-weighted average concentrations of asbestos fibers are reasonably expected to exceed 10 times, but not 100 times, those limits.

(iii) *Type "C" supplied-air respirators, continuous flow or pressure-demand class.* A type "C" continuous flow or pressure-demand, supplied-air respirator shall be used to reduce the concentrations of airborne asbestos fibers in the respirator below the exposure limits prescribed in paragraph (b) of this section, when the ceiling or the 8-hour time-weighted average airborne concentrations of asbestos fibers are reasonably expected to exceed 100 times those limits.

(iv) Establishment of a respirator program.

(a) The employer shall establish a respirator program in accordance with the requirements of the American National Standard Practices for Respiratory Protection, ANSI Z88.2-1969, which is incorporated by reference herein.

(b) See § 1910.6 concerning the availability of ANSI Z88.2-1969 and the maintenance of an historic file in connection therewith. The address of the American National Standards Institute is given in § 1910.100.

(c) No employee shall be assigned to tasks requiring the use of respirators if, based upon his most recent examination, an examining physician determines that the employee will be unable to function normally wearing a respirator, or that the safety or health of the employee or other employees will be impaired by his use of a respirator. Such employee shall be rotated to another job or given the opportunity to transfer to a different position whose duties he is able to perform with the

same employer, in the same geographical area and with the same seniority, status, and rate of pay he had just prior to such transfer, if such a different position is available.

(3) **Special clothing:** The employer shall provide, and require the use of, special clothing, such as coveralls or similar whole body clothing, head coverings, gloves, and foot coverings for any employee exposed to airborne concentrations of asbestos fibers, which exceed the ceiling level prescribed in paragraph (b) of this section.

(4) **Change rooms:**

(i) At any fixed place of employment exposed to airborne concentrations of asbestos fibers in excess of the exposure limits prescribed in paragraph (b) of this section, the employer shall provide change rooms for employees working regularly at the place.

(ii) **Clothes lockers:** The employer shall provide two separate lockers or containers for each employee, so separated or isolated as to prevent contamination of the employee's street clothes, from his work clothes.

(iii) **Laundering:**

(a) Laundering of asbestos contaminated clothing shall be done so as to prevent the release of airborne asbestos fibers in excess of the exposure limits prescribed in paragraph (b) of this section.

(b) Any employer who gives asbestos-contaminated clothing to another person for laundering shall inform such person of the requirement in (a) of this subdivision to effectively prevent the release of airborne asbestos fibers in excess of the exposure limits prescribed in paragraph (b) of this section.

(c) Contaminated clothing shall be transported in sealed impermeable bags, or other closed, impermeable containers, and labeled in accordance with paragraph (g) of this section.

(e) **Method of measurement.**

All determinations of airborne concentrations of asbestos fibers shall be made by the membrane filter method at 300-450 $\times$ (magnification) (4 millimeter objective) with phase contrast illumination.

(f) **Monitoring.**

(1) **Initial determinations.** Within 6 months of the publication of this section, every employer shall cause every place of employment where asbestos fibers are released to be monitored in such a way as to determine whether every employee's exposure to asbestos fibers is below the limits prescribed in paragraph (b) of this section. If the limits are exceeded, the employer shall immediately undertake a compliance program in accordance with paragraph (c) of this section.

(2) **Personal monitoring.**

(i) Samples shall be collected from within the breathing zone of the employees, on membrane filters of 0.8 micrometer porosity mounted in an open-face filter holder. Samples shall be taken for the determination of the 8-hour time-weighted average airborne concentrations and of the ceiling concentrations of asbestos fibers.

(ii) **Sampling frequency and patterns.** After the initial determinations required by subparagraph (1) of this paragraph, samples shall be of such frequency and pattern as to represent with reasonable accuracy the levels of exposure of employees. In no case shall the sampling be done at intervals greater than 6 months for employees whose exposure to asbestos may reasonably be foreseen to exceed the limits prescribed by paragraph (b) of this section.

(3) **Environmental monitoring.**

(i) Samples shall be collected from areas of a work environment which are representative of the airborne concentrations of asbestos fibers which may reach the breathing zone of employees. Samples shall be collected on a membrane filter of 0.8 micrometer porosity mounted in an open-face filter holder. Samples shall be taken for the determination of the 8-hour time-weighted average airborne concentrations and of the ceiling concentrations of asbestos fibers.

(ii) **Sampling frequency and patterns.** After the initial determinations required by subparagraph (1) of this paragraph, samples shall be of such frequency and pattern as to represent with reasonable accuracy the levels of exposure of the employees. In no case shall sampling be at intervals greater than 6 months for employees

whose exposures to asbestos may reasonably be foreseen to exceed the exposure limits prescribed in paragraph (b) of this section.

(4) *Employee observation of monitoring.* Affected employees, or their representatives, shall be given a reasonable opportunity to observe any monitoring required by this paragraph and shall have access to the records thereof.

(g) Caution signs and labels.

(1) Caution signs.

(i) *Posting.* Caution signs shall be provided and displayed at each location where airborne concentrations of asbestos fibers may be in excess of the exposure limits prescribed in paragraph (b) of this section. Signs shall be posted at such a distance from such a location so that an employee may read the signs and take necessary protective steps before entering the area marked by the signs. Signs shall be posted at all approaches to areas containing excessive concentrations of airborne asbestos fibers.

(ii) *Sign specifications.* The warning signs required by subdivision (i) of this subparagraph shall conform to the requirements of 20" x 14" vertical format signs specified in § 1910.145(d)(4), and to this subdivision. The signs shall display the following legend in the lower panel, with letter sizes and styles of a visibility at least equal to that specified in this subdivision.

Legend	Notation
Asbestos	1" Sans Serif, Gothic or Block.
Dust Hazard	¾" Sans Serif, Gothic or Block.
Avoid Breathing Dust	¾" Gothic.
Wear Assigned Protective Equipment.	¾" Gothic.
Do Not Remain In Area Unless Your Work Requires It.	¾" Gothic.
Breathing Asbestos Dust May Be Hazardous To Your Health.	14 point Gothic.

Spacing between lines shall be at least equal to the height of the upper of any two lines.

(2) Caution labels.

(i) *Labeling.* Caution labels shall be affixed to all raw materials, mixtures, scrap, waste, debris, and other products containing asbestos fibers, or to their containers, except that no label is required where asbestos fibers have been modified by a bonding agent, coating, binder, or other material so that during any reasonably foreseeable use, handling, storage, disposal, processing, or transportation, no airborne concentrations of asbestos fibers in excess of the exposure limits prescribed in paragraph (b) of this section will be released.

(ii) *Label specifications.* The caution labels required by subdivision (i) of this subparagraph shall be printed in letters of sufficient size and contrast as to be readily visible and legible. The label shall state:

CAUTION

Contains Asbestos Fibers
Avoid Creating Dust
Breathing Asbestos Dust May Cause
Serious Bodily Harm

(h) Housekeeping.

(1) *Cleaning.* All external surfaces in any place of employment shall be maintained free of accumulations of asbestos fibers if, with their dispersion, there would be an excessive concentration.

(2) *Waste disposal.* Asbestos waste, scrap, debris, bags, containers, equipment, and asbestos-contaminated clothing, consigned for disposal, which may produce in any reasonably foreseeable use, handling, storage, processing, disposal, or transportation airborne concentrations of asbestos fibers in excess of the exposure limits prescribed in paragraph (b) of this section shall be collected and disposed of in sealed impermeable bags, or other closed, impermeable containers.

(i) Recordkeeping.

(1) *Exposure records.* Every employer shall maintain records of any personal or environmental monitoring required by this section. Records shall be maintained for a period of at least 20 years and shall be made available upon request to the Assistant Secretary of Labor for Occupational Safety and Health, the Director of the National Institute for Occupational Safety and Health, and to authorized representatives of either.

(2) **Employee access.** Every employee and former employee shall have reasonable access to any record required to be maintained by subparagraph (1) of this paragraph, which indicates the employee's own exposure to asbestos fibers.

(3) **Employee notification.** Any employee found to have been exposed at any time to airborne concentrations of asbestos fibers in excess of the limits prescribed in paragraph (b) of this section shall be notified in writing of the exposure as soon as practicable but not later than 5 days of the finding. The employee shall also be timely notified of the corrective action being taken.

(I) Medical examinations.

(1) **General.** The employer shall provide or make available at his cost, medical examinations relative to exposure to asbestos required by this paragraph.

(2) **Preplacement.** The employer shall provide or make available to each of his employees, within 30 calendar days following his first employment in an occupation exposed to airborne concentrations of asbestos fibers, a comprehensive medical examination, which shall include, as a minimum, a chest roentgenogram (posterior-anterior 14 x 17 inches), a history to elicit symptomatology of respiratory disease, and pulmonary function tests to include forced vital capacity (FVC) and forced expiratory volume at 1 second (FEV_{1.0}).

(3) **Annual examinations.** On or before January 31, 1973, and at least annually thereafter, every employer shall provide, or make available, comprehensive medical examinations to each of his employees engaged in occupations exposed to airborne concentrations of asbestos fibers. Such annual examination shall include, as a minimum, a chest roentgenogram (posterior-anterior 14 x 17 inches), a history to elicit symptomatology of respiratory disease, and pulmonary function tests to include forced vital capacity

(FVC) and forced expiratory volume at 1 second (FEV_{1.0}).

(4) **Termination of employment.** The employer shall provide, or make available, within 30 calendar days before or after the termination of employment of any employee engaged in an occupation exposed to airborne concentrations of asbestos fibers, a comprehensive medical examination which shall include, as a minimum, a chest roentgenogram (posterior-anterior 14 x 17 inches), a history to elicit symptomatology of respiratory disease, and pulmonary function tests to include forced vital capacity (FVC) and forced expiratory volume at 1 second (FEV_{1.0}).

(5) **Recent examinations.** No medical examination is required of any employee, if adequate records show that the employee has been examined in accordance with this paragraph within the past 1-year period.

(6) Medical records.

(i) **Maintenance.** Employers of employees examined pursuant to this paragraph shall cause to be maintained complete and accurate records of all such medical examinations. Records shall be retained by employers for at least 20 years.

(ii) **Access.** The contents of the records of the medical examinations required by this paragraph shall be made available, for inspection and copying, to the Assistant Secretary of Labor for Occupational Safety and Health, the Director of NIOSH, to authorized physicians and medical consultants of either of them, and, upon the request of an employee or former employee, to his physician. Any physician who conducts a medical examination required by this paragraph shall furnish to the employer of the examined employee all the information specifically required by this paragraph, and any other medical information related to occupational exposure to asbestos fibers.

Appendix M, EPA Requirements,
removed due to illegibility.

Included were:

Chapter 1 --- Environmental Protection Agency

Part 61 -- National emission standards for hazardous air pollutants

Sections of Subpart A. -- General Provisions

- 61.0 Applicability
- 61.02 Definitions
- 61.03 Abbreviations
- 61.04 Address
- 61.05 Prohibited activities
- 61.06 Determination of construction or modification
- 61.07 Application for approval of construction or modification
- 61.08 Approval by Administrator
- 61.09 Notification of startup
- 61.10 Source reporting and waiver request
- 61.11 Waiver of compliance
- 61.12 Emission tests and monitoring.
- 61.13 Waiver of emission tests
- 61.14 Source test and analytical methods
- 61.15 Availability of information
- 61.16 State authority
- 61.17 Circumvention

Sections of Subpart B -- National Emission Standard for Asbestos

- 61.20 Applicability
- 61.21 Definitions
- 61.22 Emission standard
- 61.23 Air-cleaning
- 61.24 Reporting
- 61.25 Waste disposal sites

FINISHES

A ACOUSTICAL TREATMENT

1. K-13 as manufactured by National Cellose Corp. or proven equal. The product must have been previously successfully tested and listed by the U.S. Environmental Protection Agency.
2. Applicator of product must be licensed by the manufacturer of the material approved for use and shall use only materials and application equipment approved by the manufacturer.
3. Average thickness of new material of one inch (1") will be required.
4. Product used to replace asbestos is to be sprayed on and must have no less than 3.5 R value.
5. Product used to replace asbestos must have a noise reduction coefficient (NRC) of (.90).
6. Owner shall select colors. The contractor shall make available the product color chart.

B PAINTING

1. The painting contractor shall examine specifications and thoroughly familiarize himself with all surfaces to be painted and/or varnished.
2. COLORS: Owner shall select colors and provide the contractor with color schedule to indicate colors to be applied at various locations. Contractor is to furnish the owner with manufacturers color charts.
3. PRODUCTS: All materials shall be standard products from recognized manufacturers, ie., Sherwin-Williams, Pittsburgh, Kelly-Moore, Pratt & Lambert, etc., as approved. ONLY THE BEST GRADE OF EACH TYPE OF PAINT SHALL BE USED.
4. PREPARATION: It is the responsibility of the paint contractor to prepare all surfaces by cleaning, sanding, brushing, filling, sealing, etc., and in general preparing surfaces suitable to accept paint materials.

NOTE: CONTRACTOR TO NOTIFY OWNER BEFORE PRIMER COAT IS APPLIED. FAILURE TO DO SO WILL RESULT IN APPLICATION OF SECOND(2nd) PRIMER COAT.

5. APPLICATION: Contractor to provide adequate protection of floors, etc. Workmanship shall be of the very best, with all materials evenly spread without runs. The use of "Spray Machines, conventional or Airless" is permissible. Extreme caution to prevent overspray should be exercised.

6. CLEAN UP: At completion, all work shall be left clean, all glass shall be washed and polished and left free from paint and stains. All finish hardware shall be cleaned of paint and all debris shall be removed from the premises.

USE OF OWNER'S DUMPSTERS IS PROHIBITED.

FINAL NOTE: We recommend that bidders obtain A Guidance Document, Asbestos-Containing Materials in School Buildings, Part 1, put out by the United States Environmental Protection Agency.